

*Sub E17  
Canc. 1.*

said mainframe being adapted to receive a single one of said subframes,  
said mainframe being movably carried by said chassis for movement between  
a first position at least partly inside said disk-storage and playback device and  
a second position whereat access is provided to a subframe received therein  
such that a disk may be inserted therein;

and disk conveying means for transporting a selected one of said  
subframes from said magazine to said main frame when said main frame is in  
said first position.

#### REMARKS

The above amendments replace claim 1 with 14 new independent claims, each of the first 12 having 8 dependent claims.

In the parent application, claims were rejected over new prior art and for various informalities in the declaration.

The present amendment cures the prior art rejections by introducing new claims that distinguish the prior art over which claims in the parent case were rejected. The new claims also depart from the claims of the '001 patent to the extent necessary to patentably distinguish new prior art obtained from a new search performed by Applicant during September of 1996. Thus, the new claims seek to narrow the scope of the claims of the original patent. The new claims also broaden the scope of the original claims as discussed in the declaration and further below.

The claims of the parent application were rejected under 35 U.S.C. §251 as being based upon a defective reissue declaration. Applicant requests

the Examiner to examine the non-executed reissue declaration filed herewith for compliance with all substantive requirements. Applicant also requests that the requirement for an executed reissue declaration be postponed until final disposition of the claims, *vis a vis* prior art, is determined.

### ***Errors***

Twelve new independent claims are added in the present amendment. The purpose of adding the new claims is to broaden scope of the claims to correct the error that Applicants had failed to claim all that they were entitled to claim and to narrow the claims of the original patent to patentably distinguish prior art over which they are invalid. The references include: Kawakami, discovered by the Examiner of the parent reissues case and applied against the claims of that case, and several new patents, particularly Japanese patent application publication 60-10452 (JP '452), discovered by Applicant in August, 1996. The following list summarizes the errors cured by the new claims:

A1: The original claims recite "first disk conveying means for transporting a selected one of said disks from said magazine to said disk-reading position". The Examiner of the parent application read this limitation on Kawakami in which the disk is transported to a position  $DC_6$ , which is aligned with the position,  $DC_7$ , the position in which the disk is actually read. The Examiner pointed out that, in the preferred embodiment, the disk is not, strictly speaking, "transport[ed] ... from said magazine to said disk-reading position along a first straight line path in a plane". Rather, in the preferred

embodiment, the disk is transported in a straight line to a first position and then transported a short distance in an axial direction to the disk-reading position in which the disk is engaged with the disk reader. Thus, the Examiner said, DC<sub>6</sub> is a disk-reading position in the same (ambiguous) sense as that recited by the claim. To distinguish Kawakami and other prior art, it is necessary to remove the unclarity identified by the Examiner in the parent reissue case. Therefore, two positions are defined in the new claims: a "first position aligned with said disk-reading position" and a "disk-reading position". One limitation that distinguishes both Kawakami and JP '452: is: "said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane".

A2: The same error as above can be fixed by defining a separate first position and a second limitation to distinguish both Kawakami and JP '452, which is: "said selected one of said disks being disengageable, while at said first position, from said first disk conveying means to permit reading by said disk reader".

B: Claim 1 recites: "first disk conveying means for transporting a [disk] ... along a first straight line path *in a plane of said disk* ... means for displacing said magazine to bring [a disk] into *said plane*" (emphasis added). Since the plane of said disk does not identify a feature separate from the disk such that "means for displacing said magazine to bring [a disk] into *said plane*" is meaningful. That is to say, the plane travels with the disk so how can a disk be brought into it. The new claims are changed to define a transport plane separate from the plane of the disk.

C: Claim 1 recites: "second disk conveying means for transporting a disk ... beginning outside said disk storage and playback device". This is overly limiting and not necessary to distinguish prior art since a position providing access to the disk need not be outside the device. This error is corrected by identifying the transport origin as "access position" and reciting that the access position is only at least partly outside.

D: Claim 1 recites: "means for displacing said magazine to bring a selected one of said disks into said plane". This is more limiting than required to distinguish prior art. This recitation is replaced by the broader recitation, "means for displacing at least one of said magazine and said transport plane to bring said selected one of said disks into said transport plane" which requires only relative movement of the magazine and the transport plane.

E: The original patent contained claims employing means-plus-function language exclusively to define the important elements of the first and other claims: "... disk conveying means ..." The statute 35 U.S.C. §112, paragraph 6 requires such language to be interpreted to embrace only equivalents of structure described in the specification. This makes the claims, in certain respects, overly narrow. To correct this error, new claims employing structural language are added. The new claims replace the recitation: "first" and "second disk conveying means for transporting" along "first" and "second straight line path[s]" with the limitations "a disk conveyor with at least one drive element engageable with a selected one of said disks and movable in at least one range such as to transport said selected one of said disks ... along a first straight line path ... and such as to transport said selected one of said disks in a second straight line path ..." The original limitation "a disk not stored in said

magazine" is not limiting since a disk transported from the outside to the disk-reading position would obviously of necessity be "not stored in said magazine". Therefore, the recitation of "a disk not stored in said magazine" is replaced with "said selected one of said disks".

F: Claim 1 recites first and second disk conveying means, both of which recite "means for transporting [the] disk to" an identical position, namely, the "disk-reading position" in the original claims and "first position" in the claims as appearing in the present reissue case. However, among the advantages discussed in the specification are rapid loading and unloading of disks directly between the access and the storage and rapid transfer from the access to the disk-reading position in combination with access-loading storage (like a single-play device and a changer device in one unit). So, for example, transfer of the disk from the access position to the disk-reading position in the preferred embodiment itself can be described without mentioning the disk-reading position at all. The limitations identified above were not necessary to distinguish prior art and their inclusion was error. Moreover, by linking all of the straight-line transfers to the disk-reading position, it is arguably true that Applicants inadvertently required the first and second straight line paths to be collinear. This limitation was (and is) not necessary to distinguish the prior art. As a result of the narrowness of the claims, it is only necessary for a competitor to transpose any pair of: (1) the magazine, (2) the disk-reading (or first) position, and (3) the user-access position. Such alternative arrangements still provide benefits of the invention without infringing claim 1 (or any of the other claims). To fix this error, Applicant proposes to add two additional sets of claims in which the straight line transport is described as linked through the

access position and as linked through the magazine position as well as the original arrangement in which transport is linked through the disk-reading (first) position.

G: Antecedent basis for "selected one of said disks" already existed in claim 1, so the indefinite article is changed to the definite article to make claim definite.

H: Claim 2 requires a "main frame ... movably carried ... between a first position, whereat a disk carried therein is in said disk-reading position, and a second position whereat access is provided to a subframe received therein". This recitation is overly limiting because the claim can be easily circumvented by providing that the internal position of the mainframe position the disk held by a subframe therein in a position other than a disk-reading position. Such would be a trivial departure from the claim and clearly enabled by Applicants' specification.

I: Claim 2 is indefinite in reciting: "magazine including means for receiving a plurality of substantially planar disks in a concentric array ... a plurality of subframes, each of said subframes including means for receiving a single one of said disks; said magazine including means for receiving a plurality of said subframes". This recitation redundantly defines two independent means for accomplishing the same function.

J: Claim 2's recitations of "plane of said disk" and "said plane" are indefinite. Specifically, claim 2 recites: "first disk conveying means for transporting a [disk] ... along a first straight line path *in a plane of said disk* ... means for displacing said magazine to bring [a disk] into *said plane*" (emphasis added). Since the plane of said disk does not identify a feature

separate from the disk such that "means for displacing said magazine to bring [a disk] into *said plane*" is meaningful. That is to say, the plane travels with the disk so it is not clear how the disk can be brought into it.

K: Claim 5 requires a "main frame ... movably carried ... between a first position, whereat a disk carried therein is in said disk-reading position, and a second position whereat access is provided to a subframe received therein". This recitation is overly limiting because the claim can be easily circumvented by providing that the first position be other than a disk-reading position. Such would be a trivial departure from the claim and clearly enabled by Applicants' specification.

L: Claim 7 introduces the element "mainframe" without positively setting it forth prior to the first reference to this element. In addition, there is no antecedent basis for the first recitation of "said mainframe" in claim 7. Thus, claim 7 is indefinite.

M: Claim 7 ambiguously and ungrammatically refers to "a subframes" in the clause reciting "n-1 of said subframes being received in said magazine when one of a subframes is received in said mainframe". Where claim 7 recited "a subframes", it should have recited "said subframes". This error makes claim 7 indefinite.

N: Claim 7 requires: "said mainframe ... movably carried ... between a first position, whereat a disk carried therein is in said disk reading position". This recitation is overly limiting because the claim can be easily circumvented by providing that the internal position of the mainframe position the disk held by a subframe therein in a position other than a disk-reading position. Such would be a trivial departure from the claim and clearly

enabled by Applicants' specification. Thus, the claim is easily avoided by competitors while still obtaining benefits of the invention.

For convenience, the following tables show the limitations of original claim 1 and those of the above independent claims correlated with letter designations from the above list of errors.

1. A disk storage and playback device comprising:	10. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting a selected one of said disks from said magazine to	first disk conveying means for transporting a selected one of said disks from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A1



along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;	B
second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said first position	A1
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane	B

	, said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane.	A1
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1. A disk storage and playback device comprising:	19. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting a selected one of said disks from said magazine to	first disk conveying means for transporting a selected one of said disks from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A2

along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;	B
second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said first position	A2
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane	into said transport plan	B

	; said selected one of said disks being disengageable, while at said first position, from said first disk conveying means, to permit reading by said disk reader.	A2
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1. A disk storage and playback device comprising:	28. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting	a disk conveyor with at least one drive element engageable with	E
a selected one of said disks	a selected one of said disks	same

	and movable in at least one range such as to transport said selected one of said disks	E
from said magazine to	from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position,	A1
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path, and	B
second disk conveying means for transporting	such as to transport	E
a disk not stored in said magazine	said selected one of said disks	E
in a second straight line path beginning	in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said first position	A1
within said disk storage and playback device; and	within said disk storage and playback device; and	same

means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane.	A1

1. A disk storage and playback device comprising:	37. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same

first disk conveying means for transporting	a disk conveyor with at least one drive element engageable with	E
a selected one of said disks	a selected one of said disks	same
	and movable in at least one range such as to transport said selected one of said disks	E
from said magazine to	from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A2
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path, and	B
second disk conveying means for transporting	such as to transport	E
a disk not stored in said magazine	said selected one of said disks	E
in a second straight line path beginning	in a second straight line path beginning	same

outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said first position	A2
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane;	B
	said selected one of said disks being disengageable, while at said first position, from said at least one drive element to permit reading by said disk reader.	A2

1. A disk storage and playback device comprising:	46. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same



a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting a selected one of said disks from said magazine to	first disk conveying means for transporting a selected one of said disks from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A1
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;	B

second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said magazine	F
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane.	A1

1. A disk storage and playback device comprising:	55. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting a selected one of said disks from said magazine to	first disk conveying means for transporting a selected one of said disks from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A2
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;	B

second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said magazine	F
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said selected one of said disks being disengageable, while at said first position, from said first disk conveying means to permit reading by said disk reader.	A2

1. A disk storage and playback device comprising:	64. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting	a disk conveyor with at least one drive element engageable with	E
a selected one of said disks	a selected one of said disks	same
	and movable in at least one range such as to transport said selected one of said disks	E
from said magazine to	from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A1
along a first straight line path in a	along a first straight line path in a	same

plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path, and	B
second disk conveying means for transporting	such as to transport	E
a disk not stored in said magazine	said selected one of said disks	E
in a second straight line path beginning	in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said magazine	F
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B

	said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane.	A1
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1. A disk storage and playback device comprising:	73. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting	a disk conveyor with at least one drive element engageable with	E
a selected one of said disks	a selected one of said disks	same

	and movable in at least one range such as to transport said selected one of said disks	E
from said magazine to	from said magazine to	same
said disk-reading position	a first position aligned with said disk-reading position	A2
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path, and	B
second disk conveying means for transporting	such as to transport	E
a disk not stored in said magazine	said selected one of said disks	E
in a second straight line path beginning	in a second straight line path beginning	same
outside said disk storage and playback device to	at an access position at least partly outside said disk storage and playback device to	C
said disk-reading position	said magazine	F
within said disk storage and playback device; and	within said disk storage and playback device; and	same



means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said selected one of said disks being disengageable, while at said first position, from said at least one drive element to permit reading by said disk reader.	A2

1. A disk storage and playback device comprising:	82. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same

first disk conveying means for transporting a selected one of said disks from said magazine to	first disk conveying means for transporting a selected one of said disks from said magazine to	same
said disk-reading position	an access position	F
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;	B
second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	same
outside said disk storage and playback device to	at said access position, located at least partly outside said disk storage and playback device, to	C
said disk-reading position	said first position	A1
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D

to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane.	A1

1. A disk storage and playback device comprising:	91. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same

first disk conveying means for transporting a selected one of said disks from said magazine to	first disk conveying means for transporting a selected one of said disks from said magazine to	same
said disk-reading position	an access position	F
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;	B
second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning	same
outside said disk storage and playback device to	at said access position, located at least partly outside said disk storage and playback device, to	C
said disk-reading position	said first position	A2
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D

to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	Into said transport plane,	B
	said selected one of said disks being disengageable, while at said first position, from said first disk conveying means to permit reading by said disk reader.	A2

1. A disk storage and playback device comprising:	100. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same
first disk conveying means for transporting	a disk conveyor with at least one drive element engageable with	E

a selected one of said disks	a selected one of said disks	same
	and movable in at least one range such as to transport said selected one of said disks	E
from said magazine to	from said magazine to	same
said disk-reading position	an access position	F
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path,	B
second disk conveying means for transporting	such as to transport	E
a disk not stored in said magazine	said selected one of said disks	E
in a second straight line path beginning	in a second straight line path beginning	same
outside said disk storage and playback device to	at said access position, located at least partly outside said disk storage and playback device, to	C
said disk-reading position	said first position	A1
within said disk storage and playback device; and	within said disk storage and playback device; and	same

means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said first position being substantially fixed relative to said disk-reading position, despite a displacement of said one of said magazine and said transport plane.	A1

1. A disk storage and playback device comprising:	109. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	a magazine nondetachably carried by said chassis, said magazine including means for receiving a plurality of substantially planar disks in a concentric array;	same
a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	a disk reader for reading one of said disks when said one of said disks is in a disk-reading position;	same

first disk conveying means for transporting	a disk conveyor with at least one drive element engageable with	E
a selected one of said disks	a selected one of said disks	same
	and movable in at least one range such as to transport said selected one of said disks	E
from said magazine to	from said magazine to	same
said disk-reading position	an access position	F
along a first straight line path in a	along a first straight line path in a	same
plane of said disk and	transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path, and	B
second disk conveying means for transporting	such as to transport	E
a disk not stored in said magazine	said selected one of said disks	E
in a second straight line path beginning	in a second straight line path beginning	same
outside said disk storage and playback device to	at said access position, located at least partly outside said disk storage and playback device, to	C



said disk-reading position	said first position	A2
within said disk storage and playback device; and	within said disk storage and playback device; and	same
means for displacing	means for displacing	same
said magazine	at least one of said magazine and said transport plane	D
to bring a selected one of said disks	to bring said selected one of said disks	G
into said plane.	into said transport plane,	B
	said selected one of said disks being disengageable, while at said first position, from said at least one drive element to permit reading by said disk reader.	A2

5. A disk storage and playback device comprising:	118. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
a plurality of subframes, each of said subframes being adapted to receive a single one of said disks;	a plurality of subframes, each of said subframes being adapted to receive a single one of said disks;	same

a magazine, nondetachably, carried by said chassis, said magazine being adapted to receive a plurality of said subframes;	a magazine, nondetachably, carried by said chassis, said magazine being adapted to receive a plurality of said subframes;	same
a disk reader adapted to read one of said disks when said disk is in a disk-reading position;	a disk reader adapted to read one of said disks when said disk is in a disk-reading position;	same
a main frame adapted to receive a single one of said subframes;	a main frame adapted to receive a single one of said subframes;	same
said mainframe being movably carried by said chassis for movement between a first position	said mainframe being movably carried by said chassis for movement between a first position	same
, whereat a disk carried therein is in said disk-reading position,	[DELETED]	N

and a second position whereat access is provided to a subframe received therein such that a disk may be inserted therein or removed therefrom;	and a second position whereat access is provided to a subframe received therein such that a disk may be inserted therein or removed therefrom;	same
disk conveying means for transporting a selected one of said subframes from said magazine to said main frame when said main frame is in said first position; and	disk conveying means for transporting a selected one of said subframes from said magazine to said main frame when said main frame is in said first position; and	same
means operative when said main frame is in said first position for separating said main frame and a subframe received therein from a disk received therein, whereby said disk may be read by said disk reader.	means operative when said main frame is in said first position for separating said main frame and a subframe received therein from a disk received therein, whereby said disk may be read by said disk reader.	same

7. A disk storage and playback device comprising:	119. A disk storage and playback device comprising:	same
a chassis;	a chassis;	same
an n quantity of subframes, each of said subframes being adapted to receive a single disk;	an n quantity of subframes, each of said subframes being adapted to receive a single disk;	same
a magazine, nondetachable, carried by said chassis, said magazine being adapted to receive n quantity of said subframes;	a magazine, nondetachable, carried by said chassis, said magazine being adapted to receive n quantity of said subframes;	same
	a mainframe;	L
n-1 of said subframes being received in said magazine when one of	n-1 of said subframes being received in said magazine when one of	same
	said subframes	M
is received in said mainframe;	is received in said mainframe;	same
a disk reader adapted to read one of said disks when said disk is in a disk-reading position;	a disk reader adapted to read one of said disks when said disk is in a disk-reading position;	same

said mainframe being adapted to receive a single one of said subframes, said mainframe being movably carried by said chassis for movement between a first position	said mainframe being adapted to receive a single one of said subframes, said mainframe being movably carried by said chassis for movement between a first position	same
	at least partly inside said disk storage and playback device;	N
‘ whereat a disk carried therein is in said disk-reading position,		N
and a second position whereat access is provided to a subframe received therein such that a disk may be inserted therein;	and a second position whereat access is provided to a subframe received therein such that a disk may be inserted therein;	same
	means for moving said disk from said mainframe in said first position to said disk-reading position;	N

and disk conveying means for transporting a selected one of said subframes from said magazine to said main frame when said main frame is in said first position.	and disk conveying means for transporting a selected one of said subframes from said magazine to said main frame when said main frame is in said first position.	same
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### Rejections over Kawakami

In the parent reissue application, claims 1, 4, 8, 9, 27-36, 43, and 44 were rejected under 35 U.S.C. §102 as anticipated by Kawakami, a new reference discovered by the Examiner. New independent claims 10, 19, 28, 37, 46, 55, 64, 73, 82, 91, 100, and 109 patentably distinguish Kawakami.

New independent claims 10, 19, 28, 37, 46, 55, 64, 73, 82, 91, 100, and 109 each contain at least one limitation that is not shown by Kawakami. Therefore, the claims of the present application are not subject to rejection under 35 U.S.C. §102 over Kawakami. Claims 10 and 19 each contain the following limitations not shown by Kawakami:

first disk conveying means for transporting a selected one of said disks from said magazine to a first position aligned with said disk-reading position along a first straight line path in a transport plane parallel to a primary plane of said selected one

of said disks transported along said first straight line path ...second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning at an access position ... to said first position ... said first position being substantially fixed relative to said disk-reading position"

Referring to Kawakami Figs. 18(a) and 18(b), the disk-reading position is DC<sub>7</sub>. The only positions identifiable with the "first position" are DC<sub>6</sub>, DC<sub>7</sub>, and DC<sub>8</sub> since these are the only positions in common along the path satisfying both the limitation "from said magazine to a first position" and the path satisfying the limitation "beginning at an access position ... to said first position". However, as discussed below, neither of these paths satisfies the limitations "straight line" as required by claim 10.

The path from the magazine, position DC<sub>1</sub>, is defined by DC<sub>1</sub>-DC<sub>2</sub>-DC<sub>3</sub>-DC<sub>4</sub>-DC<sub>5</sub>-DC<sub>6</sub> and so on. The path from the access position, DC<sub>11</sub> is defined by DC<sub>11</sub>-DC<sub>6</sub>-DC<sub>8</sub> and so on. The only positions of overlap are, as stated above, along the path DC<sub>6</sub>-DC<sub>8</sub>-DC<sub>7</sub>.

When the device of Kawakami removes disks from the storage to the position DC<sub>6</sub>, DC<sub>7</sub>, or DC<sub>8</sub>, it transports them along path DC<sub>1</sub>-DC<sub>2</sub>-DC<sub>3</sub>-DC<sub>4</sub>-DC<sub>5</sub>-DC<sub>6</sub> (Note that in Fig. 18(b), disk position DC<sub>1</sub> is mislabeled as DC<sub>11</sub>). During this process, lever 104 pushes the disk from the position in the storage DC<sub>1</sub> up toward rolling pulley 352 where it reaches position DC<sub>2</sub>. Then rolling pulley 352 rotates and pushes the disk toward loading member 425 to bring the disk to position DC<sub>4</sub>. The loading member 425 then lifts the disk to position DC<sub>5</sub> so that loading member 425 forms a ramp with the bottom of guide groove

301. The disk then rolls of its own weight until it reaches position  $DC_6$  in the disk-pocket 500. This path is clearly not a straight line as recited in claim 10.

For the above reasons, claim 10 and 19 are not subject to rejection over Kawakami.

Claims 28 and 37 each contain the following recitation which is also not shown by Kawakami:

a disk conveyor with at least one drive element engageable with a selected one of said disks and movable in at least one range such as to transport said selected one of said disks from said magazine to a first position ... along a first straight line path ... and such as to transport said selected one of said disks in a second straight line path beginning at an access position ... to said first position"

Again, referring to Kawakami Figs. 18(a) and 18(b), the only positions potentially identifiable with the "first position" are  $DC_6$ ,  $DC_7$ , and  $DC_8$  since these are the only positions in common along the path satisfying both the limitation "from said magazine to a first position" and the path satisfying the limitation "beginning at an access position ... to said first position". However, as discussed above, neither of these paths satisfies the limitations "straight line" as required by claims 28 and 37.

Claims 46 and 55 each contain the limitations:



second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning at an access position at least partly outside said disk storage and playback device to said magazine within said disk storage and playback device

In Kawakami, to transport disk from the access position to the magazine, the disk is transported along path  $DC_{11}$ - $DC_6$ - $DC_8$ - $DC_9$ - $DC_{10}$ . As can be seen in Fig. 18(a), this path is clearly not meet the "straight line" recitation of claims 46 and 55 since the disk is transported in radial and axial directions along this path.

Claims 64 and 73 each contain the following limitations not shown by Kawakami:

a disk conveyor with at least one drive element engageable with a selected one of said disks and movable in at least one range ... such as to transport said selected one of said disks in a second straight line path beginning at an access position ... to said magazine

Again, as explained above, in Kawakami, the only path, otherwise identifiable with the "second ... path" limitation, is not a straight line and therefore does not meet the limitations of claims 64 and 73.

Claims 82 and 91 each contain the following recitation which is not shown by Kawakami:

first disk conveying means for transporting a selected one of said disks from said magazine to an access position along a first straight line path in a transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path

In Kawakami, the only path identifiable with the "first ... path" is DC<sub>1</sub>-DC<sub>2</sub>-DC<sub>3</sub>-DC<sub>4</sub>-DC<sub>5</sub>-DC<sub>6</sub>-DC<sub>7</sub>-DC<sub>8</sub>-DC<sub>12</sub>. As can be seen in Figs. 18(a) and 18(b) and as described above, this path is neither a straight line nor in a plane as required by claims 82 and 91. Note that the disk pocket mechanism of Kawakami of necessity moves the disk to position DC<sub>7</sub> as it transfers the disk from position DC<sub>1</sub> to position DC<sub>12</sub> even though it is not necessarily mounted for playback, because it is driven axially by a cam mechanism (See discussion at col. 21, line 66 through col. 23, line 3 and col. 24, line 56 through col. 25, line 8 and associated drawings).

Claims 100 and 109 each contain the following limitations not shown by Kawakami:

a disk conveyor with at least one drive element engageable with a selected one of said disks and movable in at least one range such as to transport said selected one of said disks from said magazine to an access position along a first straight line path, in a transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path

As explained above, the only path in Kawakami identifiable with the "first ... path" does not satisfy the straight line and "in a ... plane" recitation of claims 100 and 109.

For the foregoing reasons, none of the independent claims added by this amendment is subject to rejection over Kawakami.

One new prior art reference JP '452, shows, in Fig. 8, a device which receives disks at an access position and transports them via a carrier to a playback position along an L-shaped path. The playback position and magazine are fixed relative to the chassis. Disks are removed from the magazine in a radial direction into the carrier and the carrier moved in an axial direction to the fixed player. Disks removed from the magazine near the player move a smaller distance axially than disks more remote from the player.

Claim 10 contains the following subcombination which is not shown by JP '452:

- A) first disk conveying means for transporting a selected one of said disks from said magazine to a first position aligned with said disk-reading position along a first straight line path in a transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;
- B) second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning at an access position at least partly outside said disk storage and

playback device to said first position within said disk storage and playback device; and

C) means for displacing at least one of said magazine and said transport plane to bring said selected one of said disks into said transport plane, said first position being substantially fixed relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane.

If the first disk conveying means is identified with the mechanism used to move the disk from the magazine out to the carrier, then the first position is the position within the carrier and aligned with the holding position of the "selected" disk. In that case, clause B cannot be satisfied because the disk is transported in a straight line only to position which cannot coincide with the first position identified with clause A. That is, the two first positions cannot be satisfied by the same position because one position cannot be connected by straight lines to both the access and magazine positions.

Moreover, clause C cannot be satisfied by JP '452 because the mechanism cannot satisfy "said first position being substantially fixed relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane" for any "first position" identified for purposes of clause B. That is, to satisfy clause B, the first position must be taken as a point along the straight line of transport out of the magazine for a given disk. In that case, the clause "said first position being substantially fixed

relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane" cannot be satisfied. This is because, since the magazine is fixed, the transport plane must be movable to select different disks, That is, the straight line of transport out of the magazine changes with the selected disk transported out of the magazine. Therefore, the first position is not "substantially fixed relative to said ... transport plane" as required by the claim.

Thus, at least the above two clauses of claim 10 are not satisfied by the JP '452 reference. Therefore, claim 10 is not anticipated by JP '452.

Claim 19 contains clauses A and B, quoted above. For the reasons given above, clauses A and B cannot be simultaneously satisfied by JP '452. Moreover, claim 19 contains the following recitation:

said selected one of said disks being disengageable, while at  
said first position, from said first disk conveying means to  
permit reading by said disk reader

Reference JP '452 discloses no position, identifiable with the first position, for which the disk is disengageable while in such position. Therefore, this clause is also not satisfied by JP '452. Therefore, claim 19 is also not anticipated by JP '452.

Claim 28 contains the following recitation:

A) a disk conveyor with at least one drive element  
engageable with a selected one of said disks and movable in at

least one range such as to transport said selected one of said disks from said magazine to a first position aligned with said disk-reading position, along a first straight line path, in a transport plane parallel to a primary plane of said selected one of said disks, transported along said first straight line path, and such as to transport said selected one of said disks in a second straight line path beginning at an access position at least partly outside said disk storage and playback device to said first position within said disk storage and playback device; and

B) said first position being substantially fixed relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane.

For the reasons discussed above relative to claim 10, clause A cannot be satisfied by JP '452 because there is no position common to the first and second paths as defined in claim 28. In addition, clause B also cannot be satisfied by JP '452 as discussed above in connection with claim 10 *vis a vis* JP '452. For the above reasons, claim 28 is not anticipated by JP '452.

Claim 37 contains clause A quoted above and therefore is not anticipated by JP '452 for the reasons given. In addition, claim 37 recites:

said selected one of said disks being disengageable, while at said first position, from said at least one drive element to permit reading by said disk reader.

As discussed above with regard to claim 19, this recitation is also not satisfied by JP '452.

Claim 46 contains the following recitation:

- A) first disk conveying means for transporting a selected one of said disks from said magazine to a first position aligned with said disk-reading position along a first straight line path in a transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path;
- B) second disk conveying means for transporting a disk not stored in said magazine in a second straight line path beginning at an access position at least partly outside said disk storage and playback device to said magazine within said disk storage and playback device; and
- C) means for displacing at least one of said magazine and said transport plane to bring said selected one of said disks into said transport plane, said first position being substantially fixed relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane.

Clause C and clause A cannot both be satisfied by the Fig. 8 device described by JP '452. This is because the "first position [cannot be] substantially fixed

relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane". Moreover, clause B cannot be satisfied because the path between the magazine and the access position in the JP '452 device is a U-shaped path, which is neither in a plane nor a straight line path. Because claim 46 contains limitations not shown by JP '452, claim 46 is not anticipated by JP '452.

Claim 55 contains clauses A and B quoted above. As shown, clause B cannot be satisfied by the JP '452, Fig. 8 device. In addition, any first position consistent with clause A that is identifiable in the Fig. 8 device cannot satisfy the following recitation of claim 55:

said selected one of said disks being disengageable, while at  
said first position, from said first disk conveying means to  
permit reading by said disk reader

for the same reasons discussed above with respect to claim 10. Because claim 55 contains limitations not shown by JP '452, claim 55 is not anticipated by JP '452.

Claim 64 recites:

A) a disk conveyor with at least one drive element  
engageable with a selected one of said disks and movable in at  
least one range such as to transport said selected one of said  
disks from said magazine to a first position ... in a transport  
plane parallel to a primary plane of said selected one of said



disks transported along said first straight line path, and such as to transport said selected one of said disks in a second straight line path beginning at an access position at least partly outside said disk storage and playback device to said magazine ...

B) means for displacing at least one of said magazine and said transport plane to bring said selected one of said disks into said transport plane, said first position being substantially fixed relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane.

Clause B and clause A cannot both be satisfied by the Fig. 8 device described by JP '452 because the "first position [cannot be] substantially fixed relative to said disk-reading position, irrespective of a displacement of said one of said magazine and said transport plane". Moreover, clause A also cannot be satisfied because the path between the magazine and the access position in the JP '452 device is a U-shaped path, which is neither in a plane nor a straight line path. Because claim 64 contains limitations not shown by JP '452, claim 64 is not anticipated by JP '452.

Claim 73 contains clause A quoted above. As shown, clause A cannot be satisfied by the JP '452, Fig. 8 device. In addition, any first position consistent with clause A that is identifiable in the Fig. 8 device cannot satisfy the following recitation of claim 73:

said selected one of said disks being disengageable, while at said first position, from said first disk conveying means to permit reading by said disk reader

for the same reasons discussed above with respect to claim 10. Because claim 73 contains limitations not shown by JP '452, claim 73 is not anticipated by JP '452.

Claims 82 and 91 both contain the recitation:

A) first disk conveying means for transporting a selected one of said disks from said magazine to an access position along a first straight line path in a transport plane parallel to a primary plane of said selected one of said disks transported along said first straight line path ...

B) means for displacing at least one of said magazine and said transport plane to bring said selected one of said disks into said transport plane ...

Clause A is not satisfied by the Fig. 8 device because the path between the magazine and the access position in the JP '452 device is a U-shaped path, which is neither in a plane nor a straight line path. Clause B cannot be satisfied because JP '452 describes no "means for displacing at least one of said magazine and said transport plane". Because claims 82 and 91 contain

limitations not shown by JP '452, neither of claim 82 and 91 is anticipated by JP '452.

Claims 100 and 109 recite, in part:

A) a disk conveyor with at least one drive element engageable with a selected one of said disks and movable in at least one range such as to transport said selected one of said disks from said magazine to an access position along a first straight line path, in a transport plane parallel to a primary plane of said selected one of said disks transported by said along said first straight line path ...

B) means for displacing at least one of said magazine and said transport plane to bring said selected one of said disks into said transport plane ...

Clause A is not satisfied by the Fig. 8 device because the path between the magazine and the access position in the JP '452 device is a U-shaped path, which is neither in a plane nor a straight line path. Clause B cannot be satisfied because JP '452 describes no "means for displacing at least one of said magazine and said transport plane". Because claims 82 and 91 contain limitations not shown by JP '452, neither of claim 82 and 91 is anticipated by JP '452.

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